

February 15, 2023



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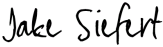
Re: United States of America, et.al. v. BP Products North America Inc. and BP-Husky Refining LLC
Northern District of Ohio, Western Division
Civil Action No. 3:20CV190
Consent Decree Semi Annual Report – 2nd Half 2022

NO USEPA ACTION REQUIRED: Information is being submitted for information purposes only.

In accordance with Part IX and ¶ 64 of the referenced Consent Decree, attached is the semi-annual report for 2H 2022.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Regards,

DocuSigned by:

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Consent Decree Semi-Annual Report

Introduction:

The purpose of this document is to fulfil the Part IX and ¶64 semi-annual reporting requirements of the Consent Decree entered into by BP-Husky Refining LLC as the owner and BP Products North America Inc. as the operator (hereinafter referred to collectively as “BPH” or “Defendants”) of the BPH Toledo Refinery. On or before February 15 and August 15 each year, until termination of this Consent Decree pursuant to Section XXIII, the Defendants shall jointly submit to U.S. EPA and Ohio EPA a semi-annual report (“Semi-Annual Report”).

Each Semi-Annual Report shall contain the following information for the previous six-month period (*i.e.*, January to June will be addressed in the report to be submitted by August 15, and July to December will be addressed in the report submitted by February 15).

Report Outline:

The format of this report follows a process where Paragraphs from the Consent Decree that include reporting requirements for BPH are quoted in a text box followed by a statement of applicability and reporting as appropriate.

The following tables are Tables of Contents for the Semi-Annual Report, which identify the paragraph of the Consent Decree to which the information is responding and where the information is presented within.

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I. Brief Summary of the Report's Most Salient Contents

As stated in ¶3 of the Order for Case No. 3:20CV190 entered by James G. Carr, Sr., U.S. District Judge:

3. The parties shall, concurrent with the filing of the Semi-Annual Reports referenced in Article IX of the Decree (Page ID 73–76), file copies thereof with this Court, including therewith a brief summary of the Report's most salient contents.

Concurrent with the submission of this report, Defendants filed a Status Report with the Court and attached a copy of this Semi-Annual Report. The Status Report contains the following summary of the report's most salient contents:

- **Continuous Emission Monitoring:** There have been no material changes since the last report was submitted to the Court. None of the Refinery's continuous emissions monitors had excessive downtime for two successive quarters during this reporting period.
- **Leak Detection and Repair of Fugitive Emissions:** There have been no material changes since the last Semi- Annual Report was submitted to the Court. The Refinery continues to make progress advancing its LDAR program in a manner consistent with the Consent Decree.
- **Wastewater Air Emissions:** The audit report and corrective action plan required by the CD were submitted to USEPA on July 21, 2020. Final corrective actions were completed on December 28, 2022. The Final QQQ Notice was submitted February 14, 2023.
- **Release Reporting:** There was an incident that caused the Refinery to report a release of reportable quantities during the reporting period.
- **Sulfur Recovery Plant:** Non-exempt SO₂ emissions exceeded the 250-ppm limit imposed by NSPS Subpart Ja regulations for 46 hours due to a pluggage in one of the sulfur dip legs coming off of the final sulfur condenser.
- **Lead Paint Abatement Supplemental Environmental Project ("SEP"):** The Refinery is partnering with the Toledo-Lucas County Health Department to perform this project. The Toledo-Lucas County Health Department is working with the City of Toledo's Department of Neighborhoods to identify eligible structures that may benefit from lead-abatement activities. As of January 1, 2023, four (4) properties were completed for a total cost of ~ \$137,270. The Refinery recently obtained from EPA a two-year extension (until March 2025) to complete the project.

II. General - Section IX - ¶64.(a)

A. **Status of Work Performed and Progress Made – CD Section IX ¶64.a.(1)**

A description of the status of work performed and progress made toward implementing all requirements of Section VI (Compliance Requirements) and Section VII (Environmental Mitigation). This topic should describe any major milestones completed and remaining to be completed.

1. CEMS

a. **CEMS Operation and Maintenance Plan – CD Section VI.A ¶22**

By no later than 180 Days after the Effective Date, the Defendants shall develop and submit for EPA and Ohio EPA review, as provided in Paragraph 22.e, a comprehensive CEMS Operation and Maintenance Plan (“CEMS O&M Plan” or “Plan”) for the Toledo Refinery that is designed to enhance the performance of CEMS components, improve CEMS accuracy and stability, and ensure continuous operation of CEMS in accordance with 40 C.F.R. § 60.13(e). This CEMS O&M Plan shall include at a minimum each of the elements identified in sub-Paragraphs 22.b through 22.d.

The CEMS O&M Plan was submitted to USEPA and Ohio EPA on September 21, 2020. The Refinery received comments on November 12, 2020, and submitted a revised plan on December 22, 2020. The Refinery did not receive any comments following the submittal of the revised plan. The following table summarizes the history of updates and submissions:

Summary of Changes	Date of Changes	Submittal Date	Comments received from Agencies?
Initial CEMS O&M Plan developed	8/15/2020	9/21/2020	Yes
Revisions made to address comments	12/22/2020	12/22/2020	No

b. **CEMS Reporting and Review and Comment on Corrective Action Plans – CD Section VI.A ¶26**

Following completion of each Root Cause Failure Analysis, the analysis and resulting corrective action plan, including a schedule for implementation, shall be submitted to EPA and Ohio EPA in a written report included with the first Semi-Annual Report required by Section IX of the Consent Decree following completion of the Root Cause Failure Analysis. Following completion of each independent third party evaluation, the evaluation and resulting recommendations and a schedule for implementation shall be submitted to EPA and Ohio EPA in the first Semi-Annual Report required by Section IX of the Consent Decree following completion of the independent third party evaluation.

During the reporting period, there were no CEMS that were not in continuous operation for at least 95 percent of the total operating time of the process unit(s) being monitored for each of two consecutive calendar quarters. Therefore, no Root Cause Analyses or Corrective Action

Plans were required to be performed. During the reporting period, there were no third-party reviews or evaluations performed; therefore, there are no reports included in Appendix A.

2. Leak Detection and Repair Program (LDAR)

a. LDAR NSPS Applicability – CD Section VI.A ¶27

Upon the Effective Date, each “process unit” (as defined by 40 C.F.R. § 60.590a(e)) at the Toledo Refinery shall be an “affected facility” for purposes of 40 C.F.R. Part 60, Subpart GGGa, and shall be subject to and comply with the requirements of Subpart GGGa no later than one year from the Effective Date, except as specifically provided in this Paragraph.

The requirements of 40 C.F.R. Part 60, Subpart GGGa, shall not apply to compressors at the Toledo Refinery based solely on the applicability requirements of this Paragraph.

Process units on which construction commenced prior to January 4, 1983, shall not be subject to the requirements in 40 C.F.R. § 60.482-7a(h)(2)(ii) regarding difficult-to-monitor valves.

Nothing in this Paragraph or in Appendix A to this Consent Decree shall relieve the Defendants of their independent obligation to comply with the requirements of any other federal, state, or local LDAR regulation that may apply to “Equipment” at the Toledo Refinery, as that term is defined in Appendix A.

As of the date of entry of this Consent Decree, all the units at the Refinery are subject to and comply with the requirements of NSPS Subpart GGGa, except for compressors. Difficult-to-monitor valves in process units on which construction commenced prior to January 4, 1983, are not subject to the requirements in 40 C.F.R. § 60.482-7a(h)(2)(ii).

b. Leak Detection and Repair Program – CD Section VI.A ¶28

The Defendants shall implement and comply with the requirements of the Leak Detection and Repair Program (“LDAR Program”) set forth in Appendix A to this Consent Decree by the dates specified therein. The requirements of Appendix A are in addition to the applicable requirements under 40 C.F.R. Part 60, Subpart GGGa; Part 61, Subparts J and V; and Part 63, Subpart CC. The terms “in light liquid service” and “in gas/vapor service” shall have the definitions set forth in the applicable provisions of 40 C.F.R. Part 60, Subpart GGGa, and Part 63, Subpart CC.

The site has implemented and is complying with requirements of the Leak Detection and Repair Program (“LDAR Program”) set forth in Appendix A to this Consent Decree by the dates specified therein. Non-conformances with Appendix A of the Decree are recorded in Table 2.

c. Leak Detection and Repair Program – CD Appendix A ¶38

The Defendants shall prepare a written report fully explaining the basis for each claim that a valve or valve packing is not commercially available, to include all relevant documentation and other information supporting the claim. In the event the Defendants rely on a commercial

unavailability determination made pursuant to Paragraph 20.c., above, the Defendants shall provide a copy to EPA of the written report associated with such commercial unavailability determination.

Such report shall also identify the commercially available valve or packing technology that comes closest to meeting the requirements for a Certified Low- Leaking Valve or Certified Low-Leaking Valve Packing Technology that is selected and installed by the Defendants pursuant to Paragraph 19 of this Appendix. Such report shall be included in the Semi-Annual Report required by Section IX of the Consent Decree, for the period in which the valve or valve packing is replaced. The LDAR written report fully explaining the basis for each claim that a valve or valve packing is not commercially available, including all relevant documentation and other information supporting the claim is included in Appendix B.

During this reporting period, there were no valves purchased for which a claim exists that a low leak valve or valve packing was not commercially available. Therefore, there are no reports attached in Appendix B.

3. NSPS QQQ Audit and Corrective Actions

b. QQQ Audit – CD Section VI.A ¶29 & ¶32

The Defendants shall conduct and complete an audit (“QQQ Audit”) of the Toledo Refinery’s compliance with Subpart QQQ of the NSPS, promulgated at 40 C.F.R. Part 60, Subpart QQQ (“NSPS Subpart QQQ”). The Defendants shall complete the QQQ Audit by the later of September 30, 2019 or 30 Days after the Effective Date.

A final report detailing the findings and conclusions of the QQQ Audit shall be submitted to EPA within ninety (90) Days of completing the QQQ Audit (the “QQQ Audit Report”).

An audit of the Refinery’s compliance with NSPS Subpart QQQ (the “QQQ Audit”) was completed by Environmental Resource Management (ERM), a third-party contractor, on April 22, 2020. A final report detailing the findings and conclusions of the QQQ Audit was submitted on July 21, 2020, within ninety (90) Days of completing the QQQ Audit (the “QQQ Audit Report”).

c. QQQ Audit Report Corrective Action Plan – CD Section VI.A ¶33

The QQQ Audit Report shall also include a corrective action plan specifying all projects necessary to bring the applicable parts of the Refinery into compliance with NSPS Subpart QQQ. The corrective action plan shall include an implementation schedule. In the event that further work is required to determine the appropriate corrective action, the QQQ Audit Report shall include an explanation of the additional work and a proposed schedule for completing both the additional work and the chosen corrective action.

The QQQ Audit Report included a corrective action plan and proposed implementation schedule. The report was completed on April 22, 2020, and submitted to USEPA on July 21, 2020. Comments were not received from USEPA or Ohio EPA on the corrective action plan and proposed implementation schedule. As of December 28, 2022, the Refinery had

completed all items included in the corrective action plan consistent with the timeline in the implementation schedule. The findings of the audit are reported in Table 2.

d. QQQ Compliance Plan Beyond 2 Years – CD Section VI.A ¶33

If the compliance plan extends for more than two years after the date of the QQQ Audit Report, the Defendants shall submit progress reports every two years until all corrective actions have been completed. These progress reports may be included as part of the Semi-Annual Reports required pursuant to Section IX of the Consent Decree.

The compliance plan and all corrective actions are complete. Therefore, biennial progress reports are not required by the Consent Decree.

e. QQQ Final QQQ Notice – CD Section VI.A ¶35

Within sixty (60) Days of completing all corrective actions identified in the QQQ Audit Report's corrective action plan, the Defendants shall submit a written report (hereinafter the "Final QQQ Notice") to EPA, confirming that the Defendants have completed all corrective actions required by the QQQ Audit Report.

All corrective actions identified in the corrective action plan have been completed as of December 28, 2022, as required by the implementation schedule. The Final QQQ Notice was submitted to EPA on February 14, 2023 within sixty (60) Days of completion of all corrective actions.

f. QQQ Inspection and Monitoring – CD Section VI.A ¶36

Beginning no later than the Effective Date, the Defendants shall conduct semi-annual inspections of the unburied portions of sewer lines in the process wastewater system at the Toledo Refinery that are subject to NSPS Subpart QQQ, including vent pipes and cleanouts, as required by 40 CFR § 60.692-2(c), for indications of cracks, gaps, or other problems that could result in VOC emissions. For cleanouts and manholes, these inspections shall also ensure that each cleanout cover and manhole cover is securely in place and has a tight seal around the edge. Whenever cracks, gaps, or other problems that could result in VOC emissions are detected during these semi-annual inspections, repairs shall be made as soon as practicable, but not later than 15 Days after identification, except as provided in 40 C.F.R. § 60.692-6.

Semi-annual inspections of the unburied portions of sewer lines in the process wastewater system that are subject to NSPS Subpart QQQ, including vent pipes and cleanouts, as required by 40 CFR § 60.692-2(c), for indications of cracks, gaps, or other problems that could result in VOC emissions are being conducted. These inspections include work to confirm that each cleanout cover and manhole cover is securely in place and equipped with a tight seal.

4. **EPCRA/CERCLA Reporting Requirements and Audits**

a. EPCRA/CERCLA RQ Release Reporting – CD Section VI.A ¶38

By no later than the Effective Date, the Defendants shall report each reportable quantity (“RQ”) release, including releases that occur during start-up and shutdown events, immediately as required by Section 103 of CERCLA, 42 U.S.C. § 9603(a), and Section 304 of EPCRA, 42 U.S.C. § 11004, upon knowledge of a release exceeding the reportable quantity.

Except as noted herein, the Refinery reported any reportable releases as soon as the release was known as required by Section 103 of CERCLA, 42 U.S.C. § 9603(a), and Section 304 of EPCRA, 42 U.S.C. § 11004. A report was made on September 20, 2022 for a release exceeding the reportable quantity of H₂S and SO₂. The written follow-up report was submitted on October 20, 2022. A copy of the follow-up EPCRA/CERCLA report was sent to Mr. James Entzminger via email.

b. EPCRA/CERCLA Pollution Notification Form – CD Section VI.A ¶39

By no later than the Effective Date, the Defendants shall maintain the Pollution Incident Notification Form used by the Toledo Refinery for, *inter alia*, complying with CERCLA Section 103, 42 U.S.C. § 9603(a), and EPCRA Section 304, 42 U.S.C. § 11004, reporting requirements so that the form explicitly requires immediate reporting of reportable quantity releases, including releases that occur during start-up and shutdown events.

The Pollution Incident Notification Form used by the Refinery for, *inter alia*, complying with CERCLA Section 103, 42 U.S.C. § 9603(a), and EPCRA Section 304, 42 U.S.C. § 11004, i.e., reporting requirements that explicitly require immediate reporting of reportable quantity releases (including releases that occur during startup and shutdown events), is maintained and utilized. That form was provided to USEPA and Ohio EPA and the Department of Justice during the consent decree negotiations. The only changes to the form have been to update contacts and phone numbers to keep the form current. No changes to the reporting requirements have been made since USEPA informed the negotiation team that the language of the form was acceptable. Revisions to the form are noted in the following table:

Summary of Changes	Revision Date
Update contact information	5/20/2020
Update contact information	6/14/2021
Revised format per EPCRA/CERCLA Audit recommendations and updated contact information.	12/15/2021

c. EPCRA/CERCLA Current List of Substances – CD Section VI.A ¶40

Within thirty (30) Days of the Effective Date, the Defendants shall provide to EPA a copy of the then-current list of substances, along with the associated RQs, that may be reportable under EPCRA or CERCLA and that are stored or used onsite. This list will be readily available in electronic format to all members of the Refinery’s environmental team. Upon

request, the Defendants shall promptly supply an electronic copy of any safety data sheets to EPA and/or Ohio EPA.

A copy of the current list of substances, along with their associated RQs, that may be reportable under EPCRA or CERCLA and that are stored or used onsite was submitted to USEPA on June 29, 2020. This list was updated to be more representative of the current substances that may be reportable, their associated RQs, and whether they are reportable under EPCRA or CERCLA. This list is attached in Appendix G. This list is readily available in electronic format to all members of the Refinery's environmental team. Upon request, the Defendants will promptly supply an electronic copy of any safety data sheets to USEPA and/or Ohio EPA.

d. EPCRA/CERCLA Audit – CD Section VI.A ¶41

Within one year of the Effective Date, the Defendants shall complete an audit, as described below, of their compliance at the Toledo Refinery with the reporting requirements of CERCLA Section 103, 42 U.S.C. § 9603(a), and EPCRA Section 304, 42 U.S.C. § 11004 (“EPCRA/CERCLA Audit”). The Defendants will retain an independent third party contractor to perform this audit.

An audit of the Refinery's compliance with the reporting requirements of CERCLA Section 103, 42 U.S.C. § 9603(a), and EPCRA Section 304, 42 U.S.C. § 11004 (the “EPCRA/CERCLA Audit”), was commenced on September 25, 2020, by AECOM Technical Services, an independent third-party contractor, and was completed on March 23, 2021.

e. EPCRA/CERCLA Audit Report – CD Section VI.A ¶41.b

A written report of the results of the EPCRA/CERCLA Audit (“EPCRA/CERCLA Audit Report”) shall be provided within ninety (90) Days after completing the EPCRA/CERCLA Audit to: (i) Ohio EPA pursuant to Section XIX (Notices) and (ii) James Entzminger, U.S. EPA, 77 West Jackson Boulevard, Chicago, IL 60604.

A written report of the results of the EPCRA/CERCLA Audit (the “EPCRA/CERCLA Audit Report”) was submitted on June 21, 2021, within ninety (90) Days after completing the EPCRA/CERCLA Audit, to: (i) Ohio EPA pursuant to Section XIX (Notices) and (ii) James Entzminger, U.S. EPA, 77 West Jackson Boulevard, Chicago, IL 60604.

f. EPCRA/CERCLA Audit Corrective Actions – CD Section VI.A ¶41.c

The Defendants shall correct any inadequacies or discrepancies identified by the EPCRA/CERCLA Audit Report within one hundred eighty (180) Days of receiving the EPCRA/CERCLA Audit Report.

Corrective actions designed to address inadequacies or discrepancies identified by the EPCRA/CERCLA Audit Report have been completed within one hundred eighty (180) Days of receiving the EPCRA/CERCLA Audit Report as shown in Table 1.

Table 1: EPCRA/CERCLA Audit Report – Inadequacies or Discrepancies

No.	Recommendation	Completion Date
1	Develop a written Refinery-specific procedure clearly stating responsibilities for identifying, evaluating, reporting, and documenting releases. The procedure should include the responsibilities of the Shift Superintendent, Environmental on-call person, other Environmental personnel, the EOC, and Technical Services.	12/15/2021
2	Review permit limits and other alarm triggers in the Refinery PI system to ensure that they are up to date and correct. This review should be an assigned responsibility within Environmental either to a single person or to a Subject Matter Expert (“SME”) who would have knowledge of a permit condition change, equipment added/removed, etc. Develop flowcharts to assist with evaluation of release events, proper release reporting, and completion of documentation. The flowcharts should include the reporting structure and responsibilities and parallel any new Refinery policies and procedures.	12/15/2021
3	Develop information and tools for Shift Superintendents and Environmental personnel for evaluating releases and making quick calculations/evaluations of a potentially reportable release. This is not to take the place of Technical Services; it is to support evaluating releases, especially those that occur outside of regular business hours. Additional information is provided under Section 5.	12/15/2021
4	Develop training materials for Learning & Development (“L&D”) to distribute as part of employee on-boarding training to Environmental personnel, Refinery Coordinators, and Shift Superintendents. Make the training slides/materials available wherever the release tools will be housed (e.g., Microsoft Teams site, etc.).	12/15/2021
5	Develop training materials for L&D to distribute on an annual basis as a computer-based training (“CBT”) to Environmental personnel, Refinery Coordinators, and Shift Superintendents that presents the new Refinery-specific procedures, guidance, responsibilities by position, and the path for detecting, evaluating, reporting, and documenting a release. Any tools that are developed should also be presented and their use described.	12/15/2021
6	Develop training materials for L&D to distribute on an annual basis as a CBT to all field employees.	12/15/2021
7	Develop information for Shift Superintendents and Environmental personnel regarding the continuous release reports (“CRRs”), including a brief explanation of the CRRs and conditions (i.e., upper and lower bounds) and how to use operational data and alarms to detect and evaluate a potentially reportable SO ₂ , HCN, and NO _x event. Develop a “quick access point” location on Microsoft Teams for this information.	12/15/2021
8	Prepare a Refinery companion to the bp CERCLA-EPCRA Release Reporting Guidance to provide Refinery or bp guidance, interpretations, and examples specific to Refinery needs.	12/15/2021
9	Incorporate the following information into the Pollution Incident Notification Form (ENV-01- FM01): - Add the Refinery address that will need to be provided at the time of the notification. - Add information regarding the Shift Superintendent information (name, date, time the release was identified, or the time the Shift Superintendent was notified of the release, or the time Environmental was notified, etc.) and Environmental personnel information (name of the person that received the call from the Shift Superintendent and the date and time that call was received).	6/14/2021

5. Environmental Mitigation – Sulfur Recovery Plant (SRP)

a. **SRP NSPS Ja Applicability – CD Section VII ¶43**

By no later than 180 Days after the Effective Date, the Toledo Refinery's SRP shall be designated as an "affected facility" as that term is used in 40 C.F.R. Part 60, Subparts A and Ja, for all pollutants applicable to SRPs, and shall be subject to and comply with all applicable requirements of 40 C.F.R. Part 60, Subparts A and Ja.

The Toledo Refinery Sulfur Recovery Plants ("SRPs") consist of:

- Three sulfur pits;
- Three Claus Sulfur Recovery Units (referred to as "SRUs 1-3");
- Tail Gas Treating Unit ("TGTU") 1 serving as a control device for SRU 1; and
- TGTU 2 serving as a control device for SRUs 2 and 3.

Effective July 1, 2020, the SRPs are designated as an "affected facility" as that term is used in 40 C.F.R. Part 60, Subparts A and Ja, for all pollutants applicable to SRPs, and shall be subject to and comply with all applicable requirements of 40 C.F.R. Part 60, Subparts A and Ja. The Refinery's SRPs exceeded emission limits imposed by these regulations one (1) time during the reporting period. Details of this event are listed in Table 2.

b. **SRP Emissions Minimization – CD Section VII ¶43**

The Refinery shall operate and maintain, to the extent practicable, the SRP, including the TGTUs, its sulfur pits, and any supplemental control devices on the SRPs, in accordance with its obligation to minimize emissions through implementation of good air pollution control practices as required by 40 C.F.R. § 60.11(d), at all times, including, but not limited to, periods of Start-up, Shutdown, malfunction, and maintenance.

The Refinery operates the SRPs and supplemental control devices in a safe and effective manner that includes good air pollution control practices as required by 40 C.F.R. § 60.11(d) at all times. During the reporting period, there were startup and shutdown events that were reported as excess emission hours in the NSPS Ja Excess Emissions reports. These events are not deviations of the Consent Decree or 40 CFR Part 60 Subpart Ja because 40 CFR 60.8(c) states that emissions during startup, shutdown, and malfunction shall not be considered a violation of the applicable emissions limit unless otherwise specified in the applicable standard. The events are described in the following table.

Date of Event	Description of Event	Cause
7/20/2022 & 7/27/2022 to 7/29/2022	The SO ₂ concentration at the TRP thermal oxidizer exceeded the 250 ppmv limit for a total of forty-four (44) 12-hr average periods during the planned startup of SRU2.	During the planned startup of the SRU2 after the facility turnaround, startup procedures require diverting around TGTU for personal and process safety reasons. While diverting the TGTU, the SO ₂ concentration in the TRP Thermal Oxidizer stack exceeded the 250 ppmv SO ₂ 12-hr rolling average. All startup procedures were being followed at this time.

Date of Event	Description of Event	Cause
7/27/2023 to 7/28/2023 & 7/30/2023 to 7/31/2023	The SO2 concentration at the SRU1 Thermal Oxidizer exceeded the required 250 ppmv SO2 for over a 12-hour period for a total exceedance of fifty-nine (59) 12-hr average periods over the startup event.	During the planned startup of the SRU1 after the facility turnaround, startup procedures require diverting around TGTU for personal and process safety reasons. While diverting the TGTU, the SO2 concentration in the SRU1 Thermal Oxidizer stack exceeded the 250 ppmv SO2 12-hr rolling average. All startup procedures were being followed at this time to try to minimize the duration of these events.
9/24/2022 to 9/30/2022	The SO2 concentration at the TRP SRU Thermal Oxidizer exceeded the required 250 ppmv SO2 for over a 12-hour period for a total exceedance of one hundred and forty-seven (147) 12-hr average periods	Following a fire, the Refinery initiated an immediate shutdown of all processing feeds. Once the fire was extinguished, the Refinery began a longer shutdown process to deinventory and purge units until the Refinery was shut down and all Refinery units were in "safe park" status. The SRU shutdown procedures were followed during this shutdown. The procedure development included evaluating ways to minimize emissions during the shutdown process. During the shutdown, operations made every attempt to minimize excess emissions consistent with safety and good air pollution control practices.
9/24/2022 to 10/3/2022	The SO2 concentration at the SRU1 Thermal Oxidizer exceeded the required 250 ppmv SO2 for over a 12-hour period for a total of two hundred thirteen (213) 12-hr average periods	Following a fire, the Refinery initiated an immediate shutdown of all processing feeds. Once the fire was extinguished, the Refinery began a longer shutdown process to deinventory and purge units until the Refinery was shut down and all Refinery units were in "safe park" status. The SRU shutdown procedures were followed during this shutdown. The procedure development included evaluating ways to minimize emissions during the shutdown process. During the shutdown, operations made every attempt to minimize excess emissions consistent with safety and good air pollution control practices.

B. Problems Encountered or Anticipated in Complying with this Consent Decree – CD Section IX ¶ 64.a.(2)

A description of any problems encountered or anticipated in complying with the requirements of Section VI (Compliance Requirements) and Section VII (Environmental Mitigation), together with implemented or proposed solutions;

A description of any problems encountered or anticipated in complying with the requirements of Section VI (Compliance Requirements) and Section VII (Environmental Mitigation) are identified in Table 2.

C. Status of Permit Applications and Permitting Activity Pertaining to Compliance with this Consent Decree – CD Section IX ¶ 64.a.(3)

A description of the status of any permit applications, including a summary of all permitting activity, pertaining to compliance with this Consent Decree;

The Refinery's air permitting consultant is in the process of preparing the PTI application to obtain a PTI from Ohio EPA that incorporates the applicable provisions of this Consent Decree. These provisions will be included in the Refinery's next Title V permit renewal.

D. Copy of Reports Submitted Only to Ohio in Compliance with this Consent Decree – CD Section IX ¶ 64.a.(4)

A copy of any reports that were submitted only to Ohio and that pertain to compliance with this Consent Decree;

Reports that pertain to the Consent Decree that were sent only to the State of Ohio are the Refinery's Title V Deviation Reports (included as attachments in Appendix D) and the Refinery's Continuous Emissions Monitoring Reports (included as attachments in Appendix F).

E. Status of Lead Abatement SEP – CD Section IX ¶ 64.a.(5)

A discussion of the Defendants' progress in satisfying its obligations in connection with the Lead Abatement SEP under Section VIII including, at a minimum, a narrative description of activities undertaken; the status of any construction or compliance measures, including the completion of any milestones; and a summary of costs incurred since the previous report;

On April 22, 2020, BP deposited the funds required by the Consent Decree, Section VIII, paragraph 50 into an escrow account with Citibank, N.A. The escrow agreement with Citibank, N.A. contains the following term:

... the Bank shall invest and reinvest the Deposit in an interest-bearing deposit obligation(s) of Citibank, N.A., insured by the Federal Deposit Insurance Corporation ("FDIC") to the applicable limits. The Depositor acknowledges that the initial interest rate is subject to change from time to time and shall be reflected in the monthly statement provided by the Bank.

The balance of the escrow account was \$1,068,944.18 on January 1, 2023 and includes \$6,214.37 of interest earned.

To implement the Lead Abatement SEP in the community around the Refinery, the Refinery signed a contract with the Toledo Lucas County Health Department. At this time, four (4) houses have been completed at a cost of \$137,270.19. A summary of the progress in satisfying its obligations in connection with the Lead Abatement SEP under Section VIII (including, at a minimum, a narrative description of activities undertaken; the status of any construction or compliance measures, including the completion of any milestones; and a summary of costs incurred since the previous report) is included in the Lead Abatement SEP Progress Report from the Toledo Lucas County Health Department in Appendix E.

On July 12, 2022 the Refinery received approval from EPA Region 5 for a lead paint abatement project to include necessary roof repairs to ensure the integrity of the abatement work.

On October 18, 2022 the Refinery received approval from EPA Region 5 to spend up to \$25,000 to subsidize training classes to eliminate at least one of the hurdles to getting more workers trained, licensed and certified to complete the lead paint abatement SEP. Thus far, no money has been spent in this area.

On February 8, 2023 the Refinery received a letter from EPA Region 5 that approved a two-year extension (until March 25, 2025) for BPH to complete the SEP.

F. Additional Reporting Requirements – CD Section IX ¶ 64.a.(6)

The specific content required by the following sub-Paragraphs of this Section ...

1. Reporting Regarding CEMS – CD Section IX ¶64.b.

a. CEMS – CD Section IX ¶64.b.(1) & (2)

- (1) For each CEMS at the Toledo Refinery, a calculation of the total amount of time per calendar quarter that the CEMS is not in continuous operation (“downtime”). This calculation must be expressed as a percentage of the operating time of the process unit(s) being monitored;
- (2) For each CEMS that is not in continuous operation for at least 95 percent of the total operating time of the process unit(s) being monitored per calendar quarter, a listing of the times and dates for the periods when the CEMS was inoperative as well as an explanation of the cause(s) of the downtime (such as maintenance or malfunction). If the cause of the downtime included a malfunction, the Semi-Annual Report must include an explanation and a description of any corrective action(s) taken.

For each CEMS at the Refinery, a calculation of the total amount of time per calendar quarter that the CEMS is not in continuous operation (“downtime”), expressed as a percentage of the operating time of the process unit(s) being monitored, is included in the CEMS quarterly reports attached in Appendix F. These reports include a listing of the times and dates for the periods when the CEMS was not in continuous operation for at least 95 percent of the total operating time of the process unit(s) being monitored per calendar quarter, with an explanation of the cause(s) of the downtime and an explanation and a description of any corrective action(s) taken. During this reporting period, no CEMS failed to meet the requirement to continuously operation for 95 percent of the total operating time for two consecutive quarters.

2. Reporting Regarding LDAR Program – CD Section IX ¶64.c

The date that the annual “Compliance Status Report” required by LDAR Appendix A, Part N, Paragraphs 34-36 was submitted to EPA shall be referenced in the Semi-Annual Reports.

The 2022 Annual “Compliance Status Report” required by LDAR Appendix A, Part N, Paragraphs 34-36 was submitted on January 31, 2023.

3. Notification of Non-Compliance – CD Section IX ¶64.d

Each Semi-Annual Report shall also include a description of any non-compliance with the requirements of this Consent Decree and an explanation of the violation’s likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such violation.

A description of any non-compliance with the requirements of this Consent Decree, an explanation of the violation’s likely cause, and the remedial steps taken, or to be taken, to prevent or minimize such violation are included in the following Table 2:

Table 2: List of Non-Compliance with Requirements of the CD

Date	Description of Non-Compliance	Cause	Corrective Action	Date Corrected
4/22/2020	QQQ audit identified fourteen drain hubs, four clean-outs, ten catch basins, and five manholes in the Benzene Stripper unit that were not monitored per NSPS QQQ requirements. Of those components, eight catch basins did not have water seals.	Components had been determined to be exempt in a previous audit; audit conducted in 2019 determined that they should be controlled.	All components except for the eight catch basins are now being monitored as of 4/15/2021. The corrective action plan initiated a project to install water seals on the eight catch basins. Plan is to have that work completed by 12/31/2022.	12/28/2022
4/22/2020	QQQ audit identified two area drains, sixteen hub drains, three catch basins, and nine cleanouts in the Hydrogen Unit that were not monitored per NSPS QQQ requirements. Of those components, two area drains, five hub drains, and three catch basins did not have water seals.	The components were inadvertently not included in the QQQ Management program when the junction boxes (manholes) were modified for the Flare Gas and Recovery Treating Project.	All components except for those requiring water seals are now being monitored as of 1/1/2021. The corrective action plan initiated a project to install water seals on the two area drains, five hub drains, and three catch basins that did not meet QQQ requirements. Plan is to have that work completed by 12/31/2022.	12/28/2022

Date	Description of Non-Compliance	Cause	Corrective Action	Date Corrected
8/17/2022 8/21/2022 8/23/2022 8/26/2022	The SO ₂ concentration at the TRP Thermal Oxidizer exceeded the required 250 ppmv on a 12-hour rolling average for a total of forty-six (46) 12-hr average periods over the entire event.	<p>After the refinery turnaround, operations was attempting to pull acid gas being diverted to Chemtrade back to the Refinery to be processed in SRU2 and SRU3. The concentration of SO₂ in the Tail Gas Unit increased unexpectedly and SO₂ at the TRP Thermal Oxidizer exceeded the limit.</p> <p>After four separate attempts to pull acid gas back to the process unit, an investigation determined the sudden increases in SO₂ were caused by pluggage in one of the sulfur dip legs coming off of the final sulfur condenser. This pluggage caused corrosion in a process analyzer. Without the use of this process analyzer, the lead board operator was not able to accurately manage the air to natural gas flow during the startup of the unit, which caused the exceedances.</p>	<p>During each event, operations troubleshooted the event to bring the SO₂ concentration down and to limit the impact of each event. Multiple attempts were made to unplug the sulfur dip leg, and it was finally removed with nitrogen on 9/2/2022. The corroded process analyzer was repaired on 9/1/2022.</p> <p>An investigation into preventing future pluggage in the dip leg is currently ongoing. Once completed, any recommendations will be implemented by the Refinery.</p>	9/2/2022
9/14/2022	During an audit, a non-certified low-leaking valve was found installed on covered equipment.	The valve was added downstream of a valve on a bleeder to allow for a pressure gauge to be installed by operations.	Valve and pressure gauge was taken out of service and subsequently uninstalled.	9/20/2022

G. Additional Matters – CD Section IX ¶ 64.a.(7)

Any additional matters that either Defendant believes should be brought to the attention of EPA and Ohio.

Pursuant to the provisions of Paragraph 6 of the Consent Decree, a Notice of Prospective Transfer of Ownership was submitted on October 14, 2022.

H. Reporting Regarding EPCRA/CERCLA Compliance Requirements – CD Section IX 67

The Defendants shall submit any written follow-up report prepared under EPCRA Section 304(c), 42 U.S.C. § 11004(c), at the same time that the written follow-up report is submitted to the State Emergency Response Commission and the Local Emergency Planning Committee for the Toledo Refinery. These written follow-up reports shall be submitted to: James Entzminger, U.S. EPA, 77 West Jackson Boulevard, Chicago, IL 60604, and may be submitted electronically to: entzminger.james@epa.gov.

A written follow-up report for the September 20, 2022 event was prepared pursuant to EPCRA Section 304(c), 42 U.S.C. § 11004(c), and submitted to Mr. James Entzminger electronically at: entzminger.james@epa.gov, at the same time the written follow-up report was submitted to the State Emergency Response Commission and the Local Emergency Planning Committee for the Toledo Refinery.

Appendix A: Copies of CEMS Root Cause Failure Analysis and Corrective Actions Plans

There were no CEMS Root Cause Failure Analysis and Corrective Actions Plans (RCA & CAP) completed during the reporting period for CEMS that were not in continuous operation for at least 95 percent of the total operating time of the process unit(s) being monitored for each of two consecutive calendar quarters.

Appendix B: LDAR Valve or Valve Packing Not Commercially Available Report

During this reporting period, there were no valves purchased for which a claim that a low leak valve or valve packing was not commercially available.

Appendix C: QQQ Compliance Schedule Beyond Two Years Report

The compliance plan and all corrective actions are complete. Therefore, biennial progress reports are not required by the Consent Decree.

Appendix D: Reports Submitted Only to Ohio in Compliance with this Consent Decree

The following table lists all reports that pertain to compliance with the Consent Decree. Copies of any reports that were submitted only to Ohio and that pertain to compliance with this Consent Decree are listed in the following table and copies are attached.

Table D.1: Copies of Reports Submitted to Ohio EPA Only

Report Name	Submittal date
3 rd Quarter 2022 Title V Quarterly Deviation Report	10/31/2022
4 th Quarter 2022 Title V Quarterly Deviation Report	1/31/2023

Appendix E: Status of Lead Abatement SEP Reports

Attached is the Lead Abatement SEP Progress Report from the Toledo Lucas County Health Department. The report(s) includes a summary of the progress in satisfying its obligations in connection with the Lead Abatement SEP under Section VIII including, at a minimum, a narrative description of activities undertaken; the status of any construction or compliance measures, including the completion of any milestones; and a summary of costs incurred since the previous report.

Appendix F: Quarterly CEMS Reports

Copies of the reports listed below are attached and include a calculation of the total amount of time per calendar quarter that the CEMS is not in continuous operation (“downtime”), expressed as a percentage of the operating time of the process unit(s) being monitored, and a listing of the times and dates for the periods when the CEMS was not in continuous operation, with an explanation of the cause(s) of the downtime and an explanation and a description of any corrective action(s) taken.

Table F.1: Copies of Quarterly CEMS Reports

Report Name	Report Period	Date Submitted
3Q2022 Quarterly CMS Summary & Data Assessment Report	3Q2022	10/31/2022
4Q2022 Quarterly CMS Summary & Data Assessment Report	4Q2022	1/27/2023

Appendix G: EPCRA or CERCLA Substances & RQs

Attached is an updated list of substances, along with their associated RQs, that may be reportable under EPCRA or CERCLA and that are stored or used onsite.



Des Gillen
President
BP-Husky Refining LLC
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Oregon, OH 43616
P 567.698.4529
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February 10, 2023

During my absence from the refinery (BP-Husky Refining), from February 13, 2023, through February 15, 2023, Jacob Siefert will have my delegation of authority.

For this period specified, my delegate has my authority for both BP Products NA and BP Husky Refining LLC, for individual transactions and contracts for services. My delegate will copy me on actions taken during my absence.

My delegate will have responsibility for the overall operation of the Toledo Refinery and will serve during this time as the "Responsible Official" as defined in OAC Rule 3745-77-01(JJ) for certifying environmental reports. The BP Toledo Refinery (Facility ID: 04-48-02-0007) meets the criteria outlined in Rule 77-01(JJ) (1) (a) for delegation of this authorization.

A handwritten signature in black ink, appearing to read 'Des Gillen', written over a horizontal dotted line.

Des Gillen